

Claims

A test method for the relevancy testing of an identifier, which is able to be transmitted to a communication means by way of a communication network in a message, comprising the steps of:

- finding a first position in a relevancy table for the identifier on the basis of a calculating rule applied for the identifier,
- seeking at least one second position alternative to the first position for the identifier in the relevancy table on the basis of a move-on rule applied to the identifier in the case of conflict where the first position is not available, until an available position, not associated with some other identifier is found in the relevancy table,
- designation of the identifier as being relevant, if the identifier, or a value associated with it, is entered at the first or the at least one second position, and
- designation of the identifier as being irrelevant, if at the first position or the at least one second position a non-use marker is entered.

2. The test method as set forth in claim 1, wherein the calculating rule and/or move-on rule for the identifier to be tested are employed for a predetermined number of working steps and wherein the marker is designated as being irrelevant, when the position

respectively found after a predetermined maximum number of working steps is associated with a different identifier in the relevancy table to the identifier to be tested.

3. A generating method for building a relevancy table provided for a communication means for relevancy testing of identifiers associated with an identifier group and provided for identifying messages relevant for the communication means and transmitted by way of a communication network, in the case of which positions provided in the relevancy table and not associated with any identifier in the identifier group, are marked with a non-use marker and in the case of which for each identifier of the identifier group the following positioning steps are performed:

- finding a first position in the relevancy table for the respective identifier using a calculating rule applied to the identifier,
- seeking at least one second position for the identifier in the relevancy table on the basis of a move-on rule applied to the identifier in the case of conflict; in the case of which the first position is not available, until an available position, not associated with any other identifier in the identifier group is found in the relevancy table,
- and entry of the identifier or of a value associated with it at the respectively found first or at least one second position.

4. The generating method as set forth in claim 3, wherein for the identifiers of the identifier group a maximum number of working steps is found and made available, such number being maximally necessary during application of the calculating rule and/or the move-on

rule to the identifiers of the identifier group so that the maximum number may be employed as a discontinuance criterion during the relevancy testing of an identifier not contained in the identifier group.

5. The generating method as set forth in claim 3, wherein at least one position in the relevancy table is so associated in an optimized manner with an identifier of the identifier group that the number of working steps necessary for finding the position is low.

6. The generating method as set forth in claim 5, wherein the number of the positions able to be associated with identifiers of the identifier group in the relevancy table is increased or reduced and/or wherein the identifiers of the identifier group are transformed to a representation sub-set as part of the application of the calculating rule, on the basis of which representation sub-set positions in the relevancy table are able to be associated with the respective identifiers, the representation sub-set being more particularly so constituted that the positions associated with the respective identifiers are placed evenly and avoiding conflict in the relevancy table and/or wherein a numerical value, which is more particularly set as a random number or numerical series, is added to or subtracted from each identifier of the identifier group and/or wherein the identifiers are respectively multiplied by a multiplier and/or wherein logical operations are performed, such logical operations being more especially logical "AND", logical "OR" or "shift".

7. The generating method as set forth in claim 5, wherein the order, in accordance with which positions are

associated with the identifiers of the identifier group in the relevancy table, is varied.

8. The generating method as set forth in claim 5, wherein the at least one identifier positioned in the relevancy table in an optimum manner, is selected in accordance with a predetermined criterion and more especially in accordance with an expected frequency of transmission or in accordance with a priority of the message containing it.

9. The generating method as set forth in claim 1, wherein on application of the calculating rule and/or the move-on rule an indicator is found pointing to the respective first and/or the respective at least one second position, this being performed by dividing the identifier or, respectively, a move-on value derived from same by a prime number, which corresponds to the number of positions provided in the relevancy table for identifiers, such indicator being more particularly found as the whole number remainder of division of the value of the identifiers by the prime number.

10. The generating method as set forth in claim 1, wherein a move-on rule is applied essentially containing the calculating rule.

11. The generating method as set forth in claim 1, wherein the identifier is contained in an address data item, more particularly in a target address, of a respective message or in a content identifier for a content of the respective message.

12. The generating method as set forth in claim 1,

wherein as a communication network a broadcast network is utilized and/or wherein as a communication network a bus system and more particularly a CAN bus system or a LIN bus system is employed.

13. The generating method as set forth in claim 1, wherein as a non-use marker a void marker and/or a value associated with an invalid identifier not contained in the identifier group is provided.

14. The generating method as set forth in claim 1, wherein for finding the first or at least one second position in the relevancy table for the identifier a calculating rule is applied influenced by a measure recited in claim 6 is employed.

15. A test module for relevancy testing of an identifier which is able to be transmitted to a communication means by way of a communication network in a message, comprising test means for the performance of the steps:

- finding a first position in the relevancy table for the respective identifier using a calculating rule applied to the identifier,
- seeking at least one second position alternative to the first position for the identifier in the relevancy table on the basis of a move-on rule applied to the identifier in the case of conflict where the first position is not available, until an available position, not associated with some other identifier is found in the relevancy table,
- designation of the identifier as being relevant, if the identifier, or a value associated with it, is entered at the first or the at least one second position,

- and designation of the identifier as being irrelevant, if at the first position or the at least one second position a non-use marker is entered.

16. A generating module for building a relevancy table provided for a communication means for relevancy testing of identifiers associated with an identifier group, such identifiers being provided for identifying messages able to be transmitted by way of a communication network and relevant for the communication means, comprising marking means for marking positions, which are provided in the relevancy table and not associated with any identifier of the identifier group with a non-use marker and positioning means for performing the following positioning steps for each identifier of the identifier group

- finding a first position in the relevancy table for the respective identifier using a calculating rule applied to the identifier,
- seeking at least one second position for the identifier in the relevancy table on the basis of a move-on rule applied to the identifier in the case of conflict, in the case of which the first position is not available, until an available position, not associated with any other identifier in the identifier group is found in the relevancy table,
- and entry of the identifier or of a value associated with it at the respectively found first or at least one second position.

17. A communication means and more particularly a CAN bus participant or a CAN interface component, comprising a test module as set forth in claim 15, wherein more particularly the relevancy table is contained in a non-

volatile memory of the communication means and/or comprising a generating module as set forth in claim 16.

18. A motor vehicle and/or a development tool, more particularly in the form of a personal computer, comprising a communication means as set forth in claim and/or comprising a test module as set forth in claim 16 and/or comprising a generating module as set forth in claim 16.

19. The test module as set forth in claim 15 and/or a generating module as set forth in claim 16, same respectively comprising a program code able to be implemented by a control module of a communication means and/or of a development tool.

20. A storage medium more particularly in the form of a diskette, a CD-ROM, a digital versatile disk, a hard disk unit or the like having stored therein a test module and/or a generating module as set forth in claim 19.

160036456-0402002